



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,832	11/16/2006	Christian Buchler	PD030051	1691
24498 7590 02/03/2010 Robert D. Shedd, Patent Operations THOMSON Licensing LLC P.O. Box 5312 Princeton, NJ 08543-5312				
EXAMINER				
CHU, KIM KWOK				
ART UNIT		PAPER NUMBER		
2627				
MAIL DATE		DELIVERY MODE		
02/03/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/556,832

Applicant(s)

BUCHLER, CHRISTIAN

Examiner

Kim-Kwok CHU

Art Unit

2627

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed on 11/20/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination after Final Rejection

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 20, 2009 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 12, line 1, the phrase "a track type signal" is vague because the claimed "track type" can be considered as different track patterns/formats which are not the present invention. In other words, the phrase "a track type

Art Unit: 2627

signal" should be clarified by --a land or groove type track signal--.

Similarly, in each of Claims 15 and 17, line 1, the phrase "a track type signal" should be clarified by --a land or groove type track signal--.

Regarding Claim 12, line 7, the phrase "a scanning beam" is vague because it is not clear whether the beam is the claimed "main beam", "secondary beam" or other type of beam which the scanning unit is operative to produce as claimed in line 3.

Similarly, in each of Claims 15 and 17, line 12, the phrase "a scanning beam" is vague because it is not clear whether the beam is the claimed "main beam", "secondary beam" or other type of beam which the scanning unit is operative to produce as claimed in line 3.

In Claim 12, line 9, the phrase "by feeding a disturbance signal" is vague because the claimed disturbance signal is not a error type signal obtained from light reflected from an optical recording medium but it is generated from a disturbance signal generator DG (Figs. 14A, 14B and 15). Accordingly, the claimed "disturbance signal" should be clarified by including its generating means and its function of modulating the focus error signal (specification, section 52).

Art Unit: 2627

In Claim 12, lines 16 and 17, the limitation "deriving first and second branch weightsbetween the first error signal and the second error signal" is not clear because the above phrase only describes how to generate one branch weight from the disturbance signal.

In Claim 17, lines 15 and 16, the limitation "deriving first and second branch weights by changing the first and second branch weight " is not clear because the claimed branch weights can be derived from changing the branch weights.

The claims not specifically mentioned above are rejected because these claims are dependent on the rejected base claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless -
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

5. Claims 12-19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tanaka (U.S. Patent 6,388,963).
6. Tanaka teaches a method for generating a track type signal

Art Unit: 2627

having the steps as recited in Claims 12-14. For example, Tanaka teaches the following:

Regarding Claim 12, the method for generating a track type signal using a scanning unit 6 (column 1, lines 40) for an optical recording medium 2 having data stored in tracks (Figs. 2 and 13), wherein the scanning unit 6 includes an objective lens 65 (Fig. 2) and a focus control loop 676B (Fig. 8), and is operative to produce an optical main beam SM (Fig. 8) and at least one secondary beam S1 (Fig. 8) and to evaluate light reflected from the optical recording medium 2 with a plurality of photodetector segments 671-673 (Fig. 8) associated with the main beam SM and the at least one secondary beam S1 (Fig. 8), the method comprising steps of: scanning the optical recording medium 2 with a scanning beam SM, S1 (Fig. 8), the focus control loop 676B being activated (servo focus is an inherent operation); deflecting the objective lens in a focus direction by feeding a disturbance signal FC (error signal/compensated signal) into the focus control loop (Fig. 8); deriving a first error signal FC only from signals of the photodetector segments 672 associated with the main beam SM (Figs. 3 and 8); deriving a second error signal CTS different from the first error signal FC only from signals (E, F, G, H) of the photodetector segments

Art Unit: 2627

671/673 associated with the at least one secondary beam (Fig. 8; CTS and FC are different); deriving first and second branch weights (normalized) from the disturbance signal (error signals) multiplied with a difference between the first error signal FC and the second error signal CTS (Figs. 8 and 11; servo loop operation)); and forming the track type signal TE (Fig. 8) by combining the first error signal FC multiplied by the first branch weight with the second error CTS signal multiplied by the second branch weight (Fig. 8; branch weights are +1, -1 and α).

Regarding Claim 13, the step of deriving the first and second branch weights comprises one of averaging and integrating the disturbance signal multiplied with a difference between the first error signal and the second error signal (Figs. 8 and 11; signal processing inherently has averaging and integrating operations).

Regarding Claim 14, those signals involved in the method that are based on a plurality of individual signals are normalized relative to a sum of the individual signals (Figs. 1 and 13; normalization process 84/85).

7. Claims 15 and 16 have limitations similar to those treated in the above rejection, and are met by the reference as

Art Unit: 2627

discussed above. Claim 15 however also recites the following limitation which is also taught by the prior art of Tanaka:

Regarding Claim 15, calculating first and second branch weights (normalization) from the amplitudes of the first and second error signals (FC and CTS) such that a difference between the first and second error signals multiplied by the first and second branch weights disappears; branch weight such as +1, -1 and α can be arbitrary set so that $FC = CTS$).

8. Claims 17-19 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Claim 17 however also recites the following limitation which is also taught by the prior art of Tanaka:

Regarding Claim 15, if there is any difference between the amplitude of the first error signal FC multiplied by the first branch weight and the amplitude of the second error signal CTS multiplied by the second branch weights such that the difference between the amplitudes is reduced (branch weight such as +1, -1 and α can be arbitrary set so that CTS is close to FC).

Related Prior Art

Art Unit: 2627

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Buchler (7,499,382) is pertinent because Buchler teaches automatic signal adjustment using weighting factor.

Response to Remarks

10. Applicant's Remarks filed on November 16, 2009 have been fully considered.

Applicant cancels Claims 1-11 and add new Claims 12-19. The new Claims 12-19 are under claim infiniteness rejection and are still anticipated by the reference of Tanaka as listed in last Office Action.

11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through

Art Unit: 2627

Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/TAN Xuan DINH/
Primary Examiner, Art Unit 2627
January 29, 2010

/Kim-Kwok CHU/
Examiner AU2627
January 27, 2010
(571) 272-7585